

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545772

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-82-94-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P545772  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-2-LD4-2STD-40-UNV-82-94-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

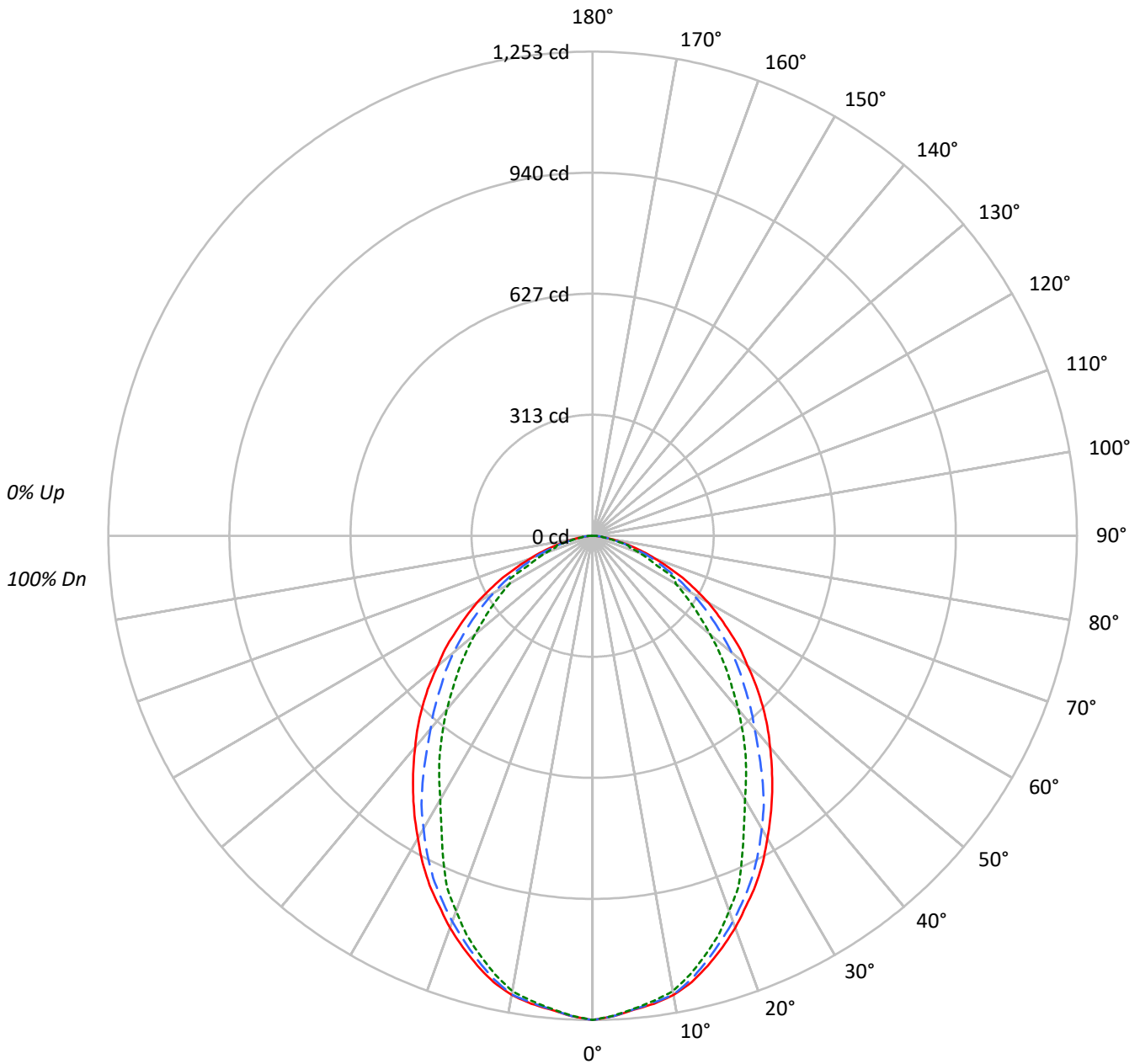
Lumens per Lamp: N/A  
Luminaire Lumens: 2460.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6744	6744	6744
5°	6653	6645	6637
10°	6595	6587	6539
15°	6417	6352	6264
20°	6182	6082	5916
25°	5927	5798	5437
30°	5618	5438	4898
35°	5321	5026	4531
40°	5018	4580	4122
45°	4730	4234	3726
50°	4379	3930	3323
55°	4051	3561	2977
60°	3711	3181	2666
65°	3265	2785	2361
70°	2689	2439	2006
75°	2140	1867	1959
80°	1438	1348	1258
85°	895	1074	1254



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.6	4.7
10°-20°	320.1	13.0
20°-30°	443.2	18.0
30°-40°	472.6	19.2
40°-50°	431.1	17.5
50°-60°	337.7	13.7
60°-70°	220.1	8.9
70°-80°	97.5	4.0
80°-90°	20.9	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	880.0	35.8
0°-40°	1352.5	55.0
0°-60°	2121.4	86.2
0°-90°	2460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2460.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1253	1253	1253	1253	1253	
5°	1231	1230	1230	1228	1228	117
15°	1152	1152	1140	1128	1124	324
25°	998	992	976	942	916	458
35°	810	804	765	707	690	506
45°	622	608	556	510	490	479
55°	432	419	380	335	317	387
65°	256	242	219	223	185	253
75°	103	96	90	86	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1253.1	1253.1	1253.1	1253.1	1253.1
2.5°	1244.4	1244.4	1244.4	1243.0	1243.0
5°	1231.4	1229.9	1229.9	1228.5	1228.5
7.5°	1221.2	1219.8	1218.3	1216.9	1214.0
10°	1206.7	1206.7	1205.3	1198.0	1196.6
12.5°	1183.6	1182.1	1176.3	1166.2	1163.3
15°	1151.7	1151.7	1140.1	1128.5	1124.2
17.5°	1116.9	1115.5	1101.0	1089.4	1083.6
20°	1079.3	1076.4	1061.9	1043.0	1032.9
22.5°	1037.2	1037.2	1019.9	995.2	985.1
25°	998.1	992.3	976.4	941.6	915.6
27.5°	953.2	944.5	927.1	877.9	847.5
30°	904.0	899.6	875.0	811.2	788.1
32.5°	857.6	850.4	824.3	757.6	738.8
35°	809.8	804.0	764.9	706.9	689.6
37.5°	762.0	754.8	705.5	659.1	637.4
40°	714.2	705.5	651.9	609.9	586.7
42.5°	669.3	657.7	605.5	560.6	534.6
45°	621.5	608.4	556.3	509.9	489.6
47.5°	573.7	562.1	514.3	466.5	443.3
50°	523.0	512.8	469.4	421.6	396.9
52.5°	481.0	465.0	423.0	375.2	354.9
55°	431.7	418.7	379.5	334.6	317.3
57.5°	386.8	373.8	337.5	295.5	281.0
60°	344.8	325.9	295.5	259.3	247.7
62.5°	298.4	283.9	257.9	227.4	241.9
65°	256.4	241.9	218.7	223.1	185.4
67.5°	210.1	202.8	182.5	162.2	156.5
70°	170.9	162.2	155.0	133.3	127.5
72.5°	136.2	127.5	117.3	105.8	101.4
75°	102.9	95.6	89.8	85.5	94.2
77.5°	71.0	68.1	63.7	59.4	57.9
80°	46.4	44.9	43.5	42.0	40.6
82.5°	27.5	27.5	27.5	27.5	27.5
85°	14.5	15.9	17.4	18.8	20.3
87.5°	8.7	8.7	10.1	11.6	13.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)